

Dual detector fit update + DQM

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Last time

- Last time I have shown the first sensitivity with fully correlated systematics.
- The fit seems working now.

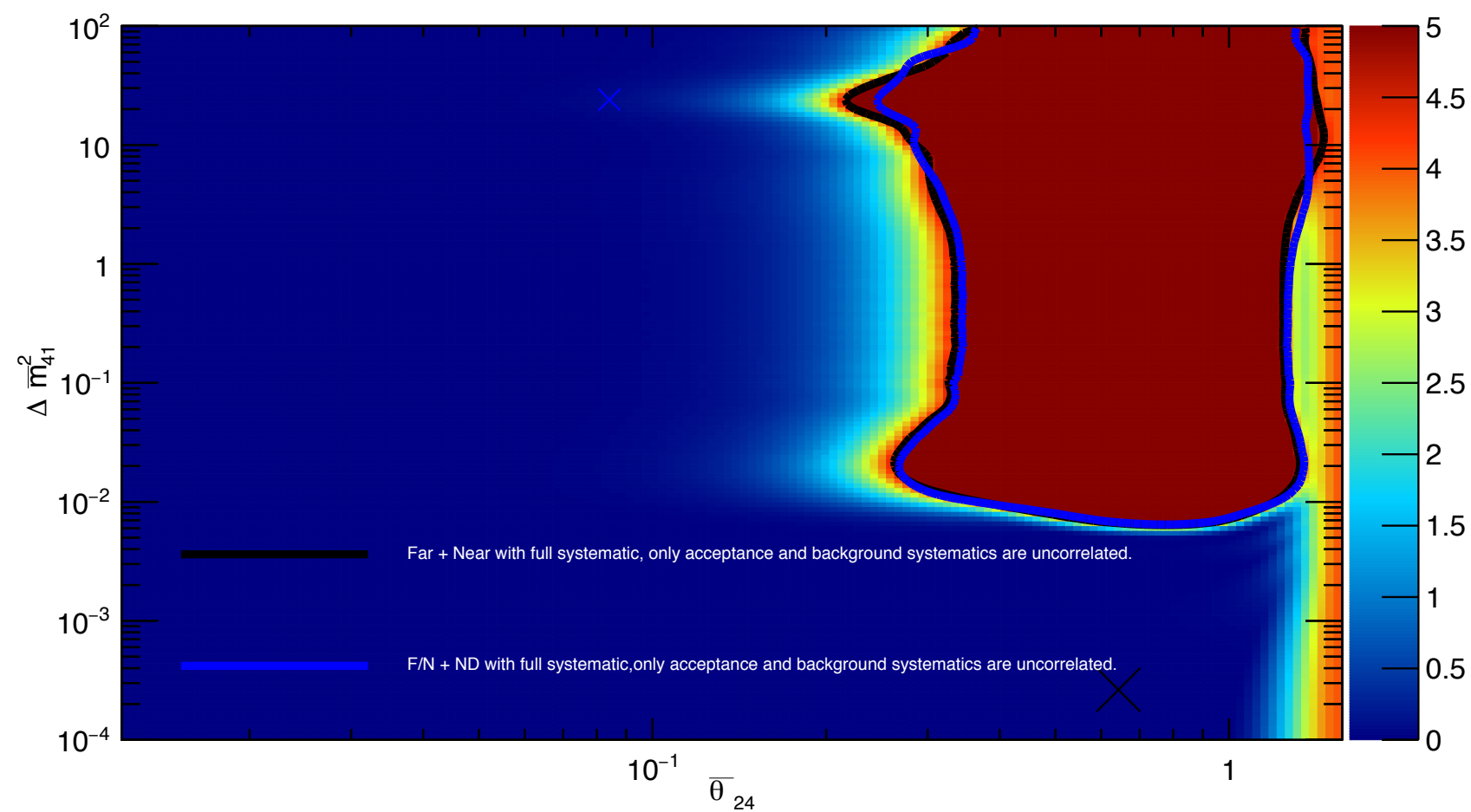


Introduction

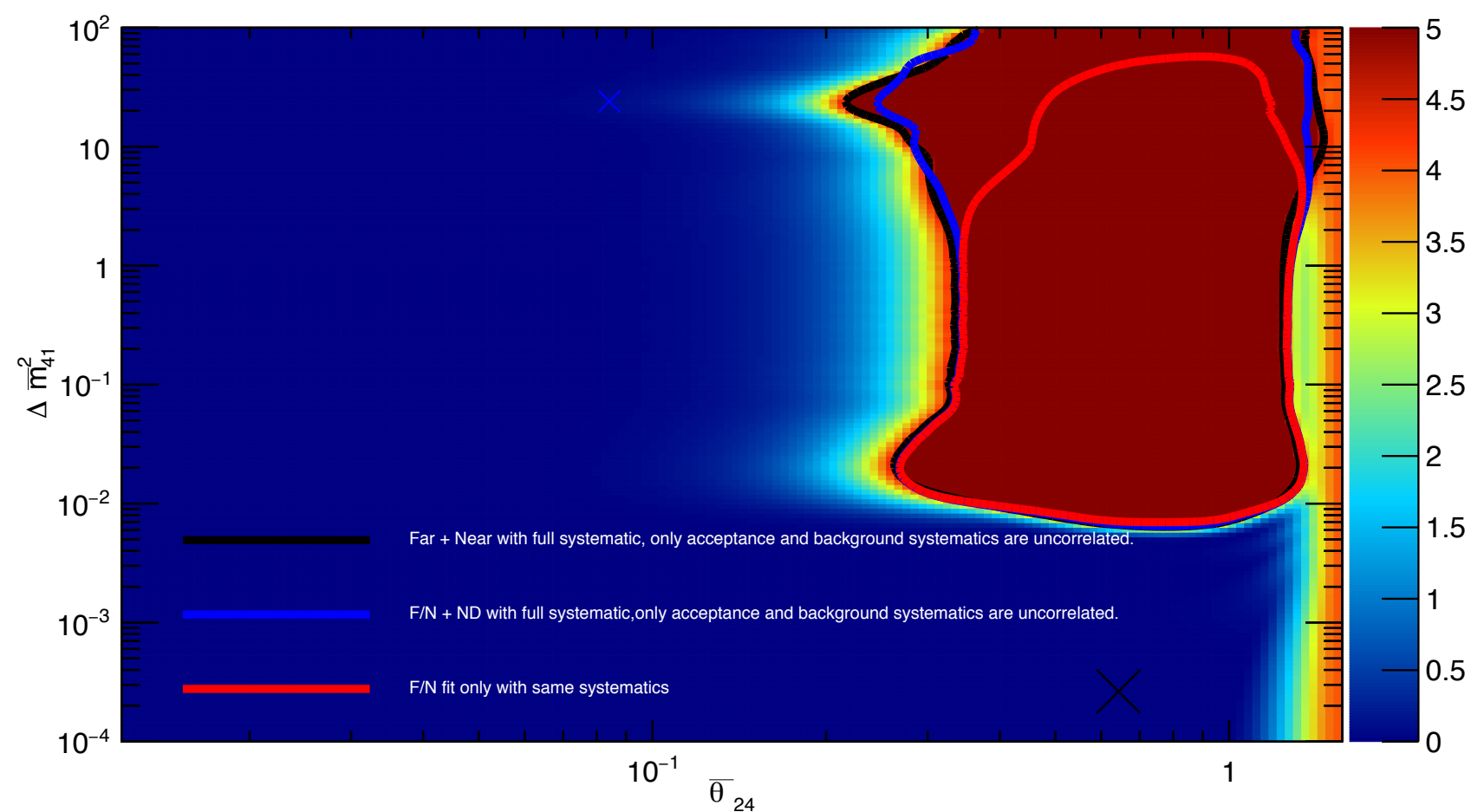
- Several plots are made with different systematics uncertainty error band.



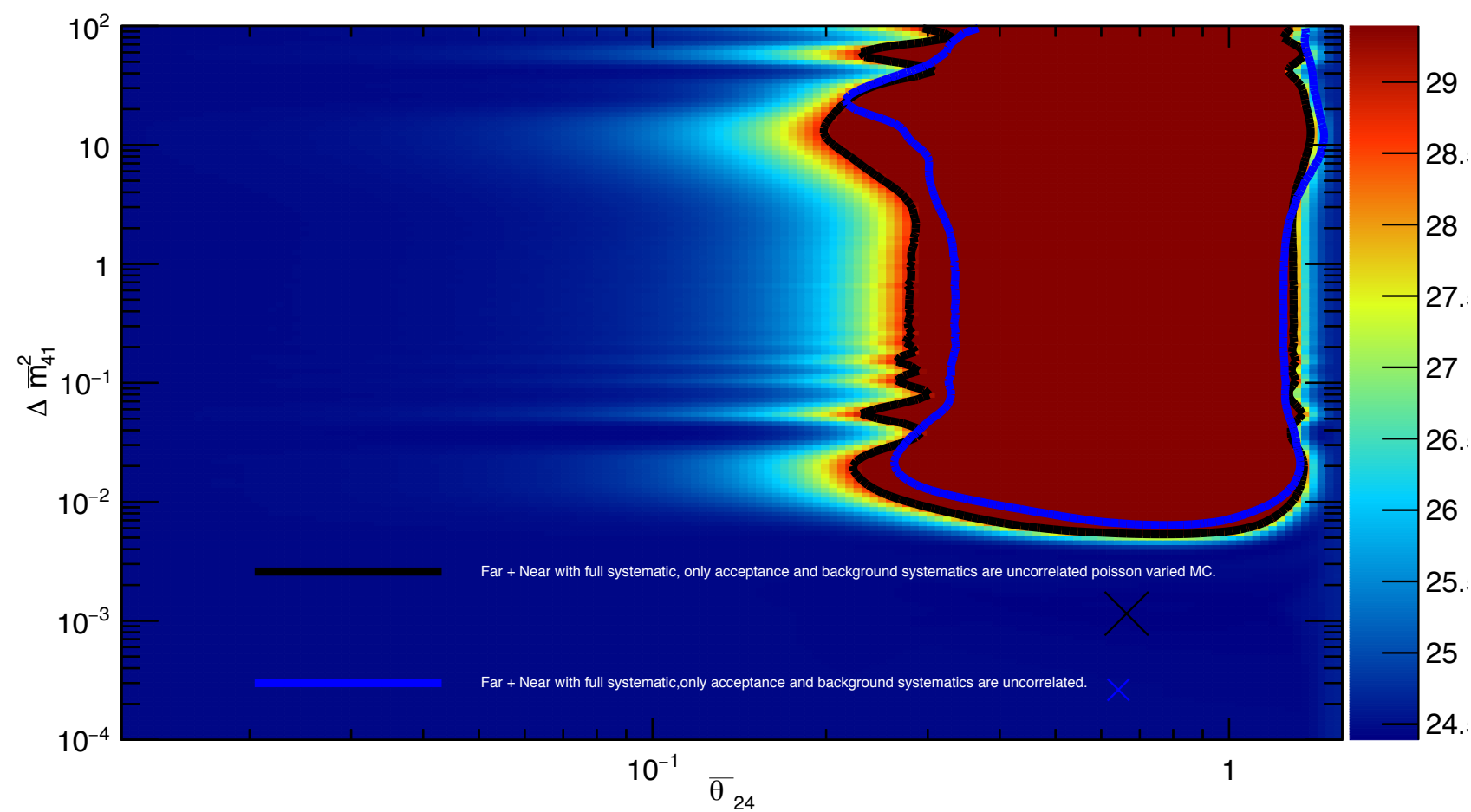
Comparison between dual detector fits & F/N + ND fit



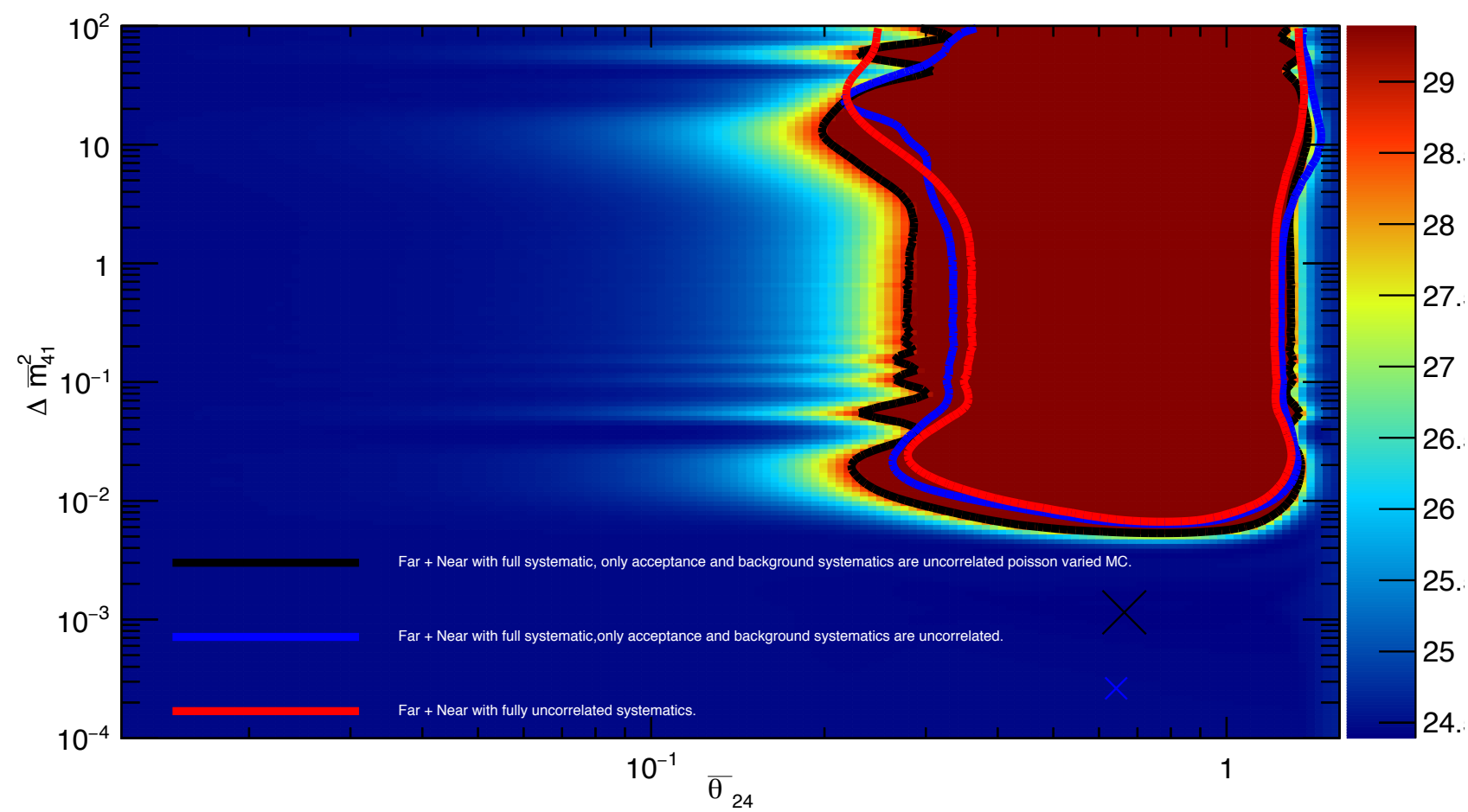
Compare it with F/N framework



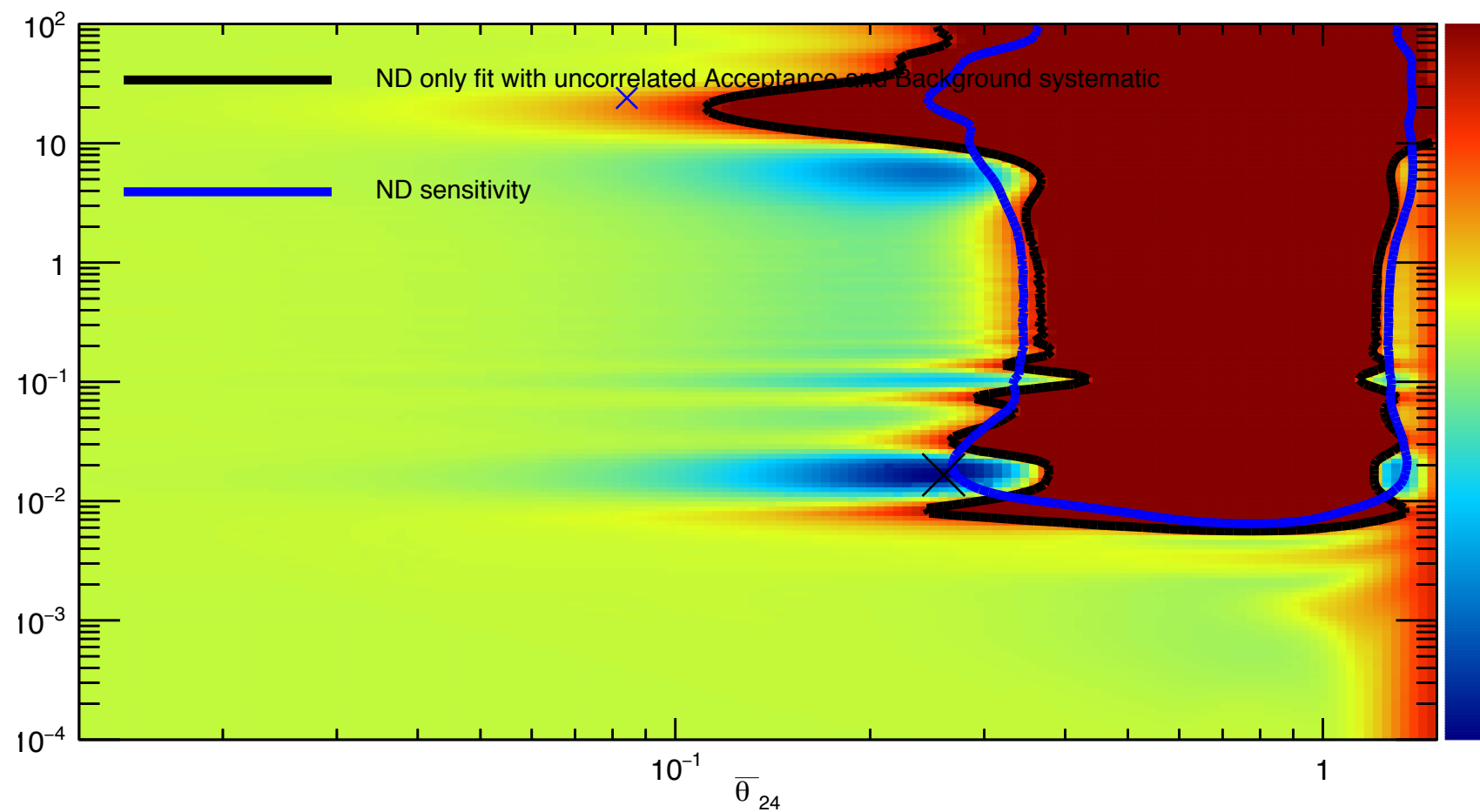
Dual detector fit with different MCs



Comparison with fully uncorrelated systematics



Reminder: Limits from F/N + ND fit



Systematic uncertainties

- As part of the tasks, I am trying to work out the correct correlation for Decay pipe systematic. Once we have all the systematic uncertainty we should be able to produce an accuracy limits with this dual detector framework.

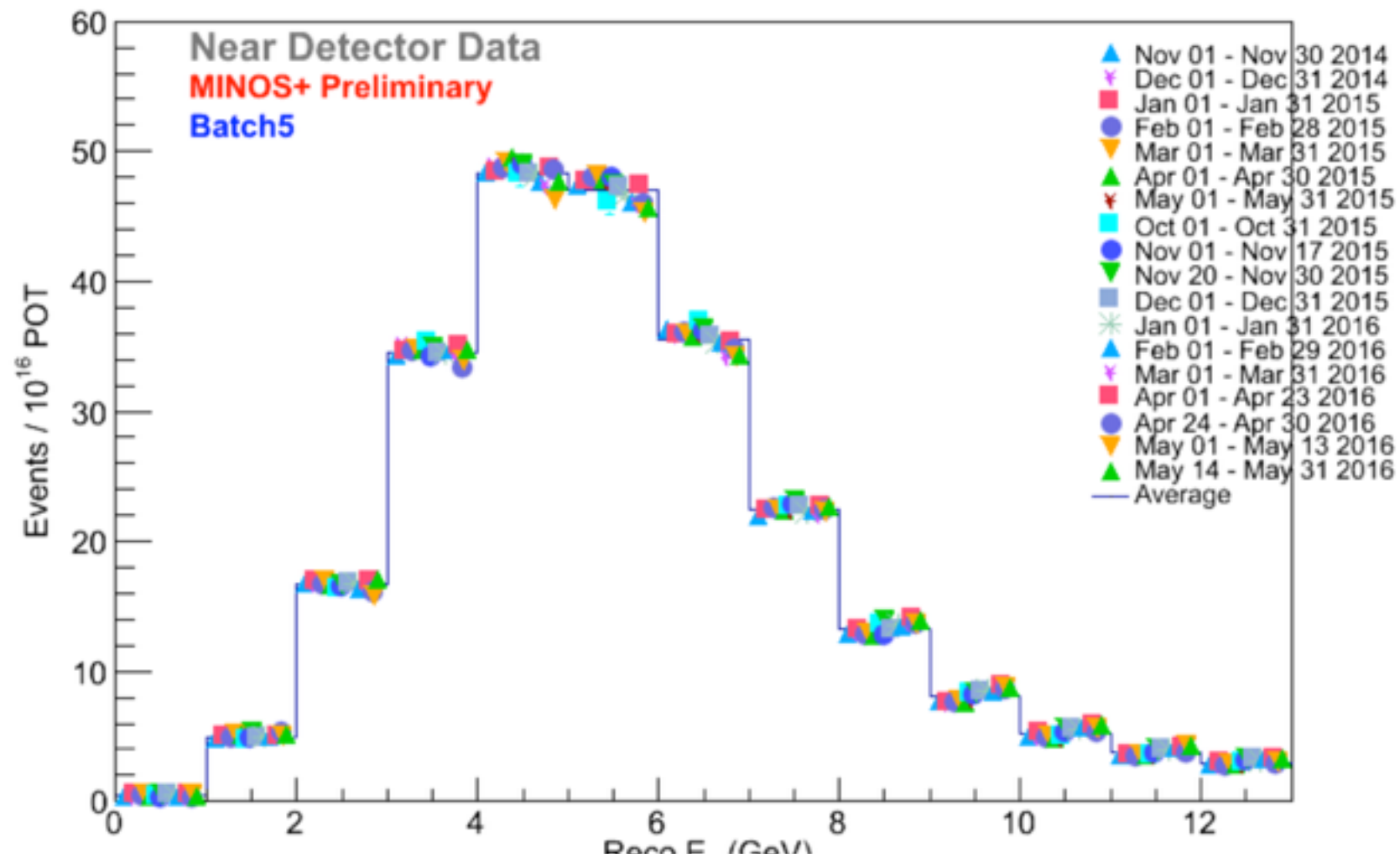


DQM checking

- As many of you know, we found the mis-alignment of the horn 1 recently, and Jim's hope us can tell when this happens
- A suggestion from Karol is to looking at the high energy tail of the energy spectrum. Julia (NoVA) confirmed this behaviour as well.

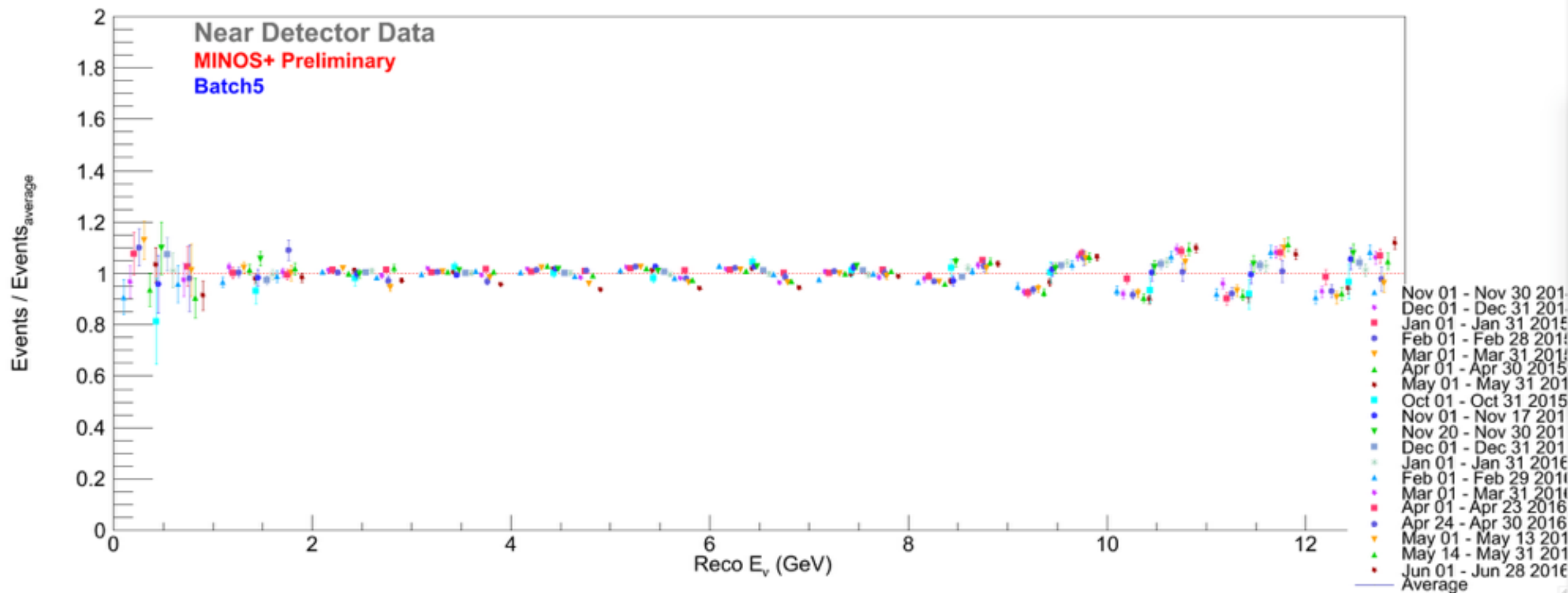


This Plot on DQM site is no longer valid



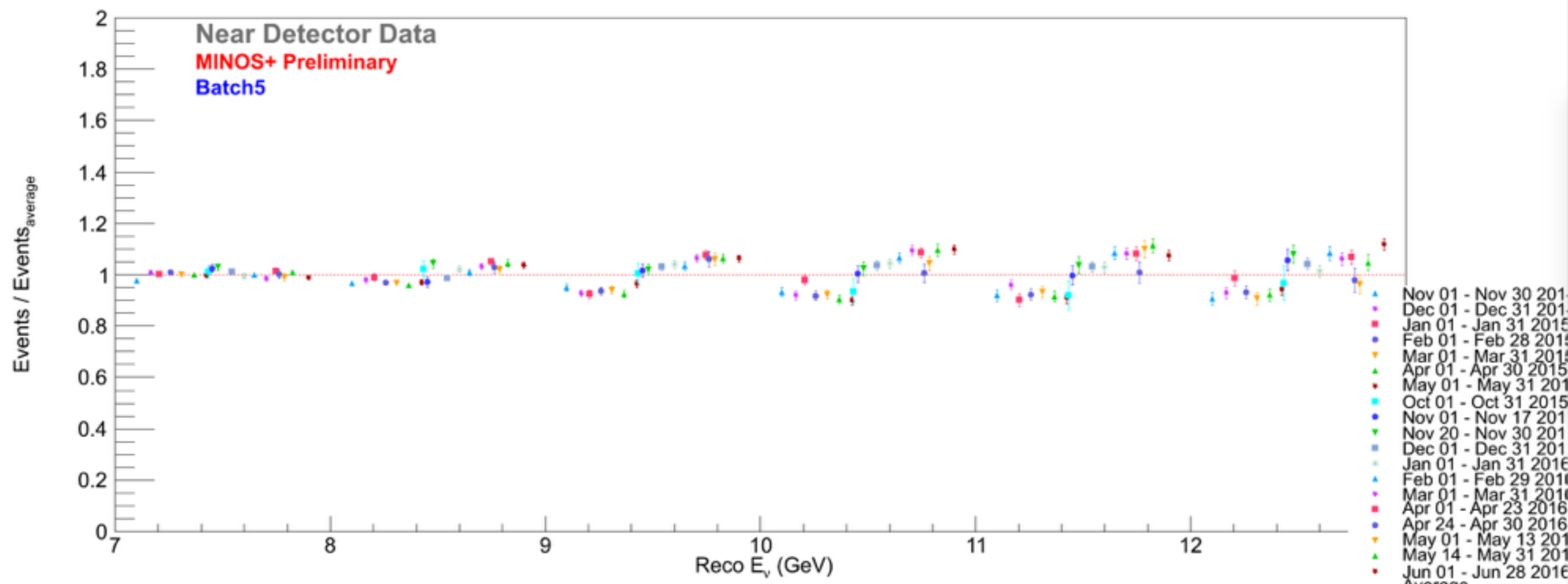
Batch 5 event energy / average

Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)



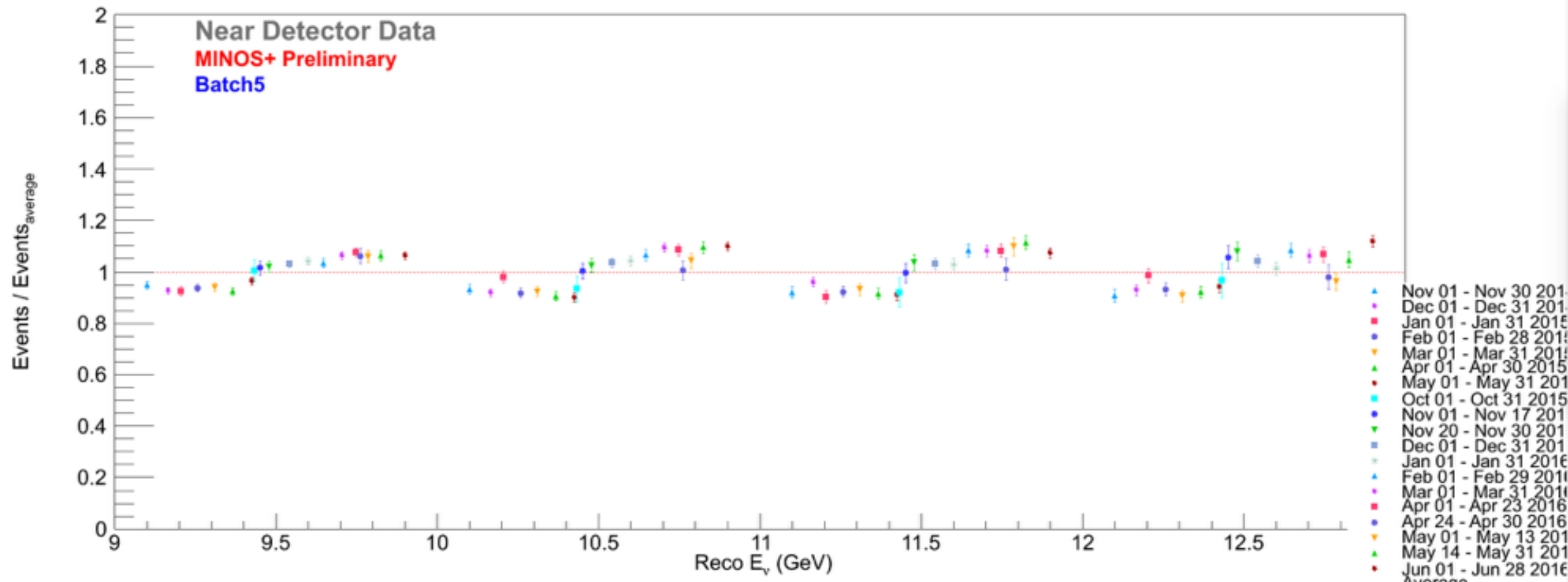
Batch 5 from 7 - 13 GeV

Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)



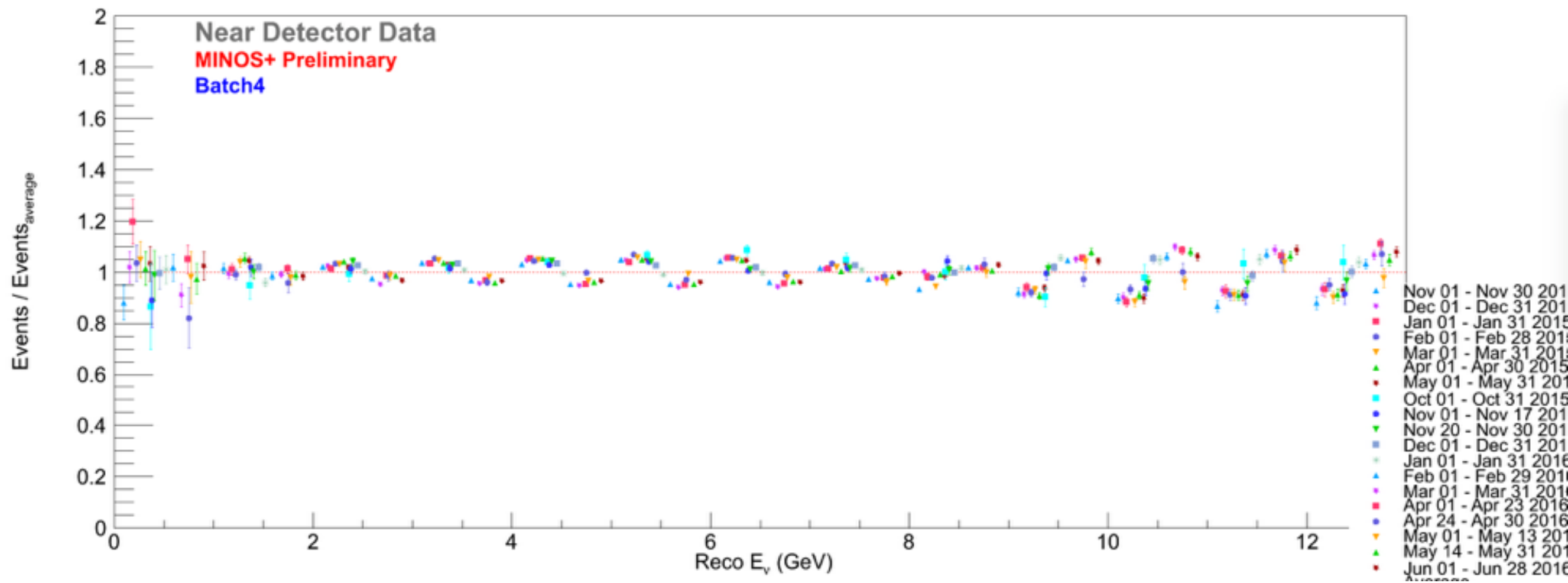
Batch 5 from 9-13 GeV

Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)



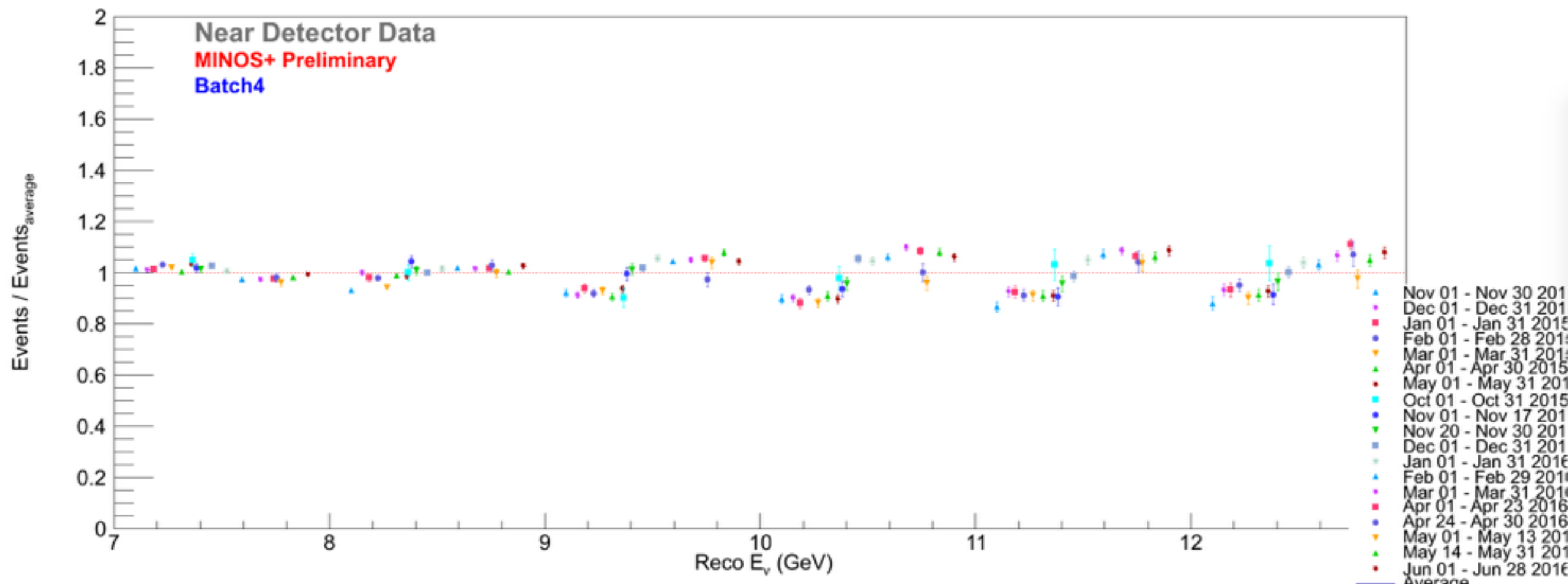
Batch 4

Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)



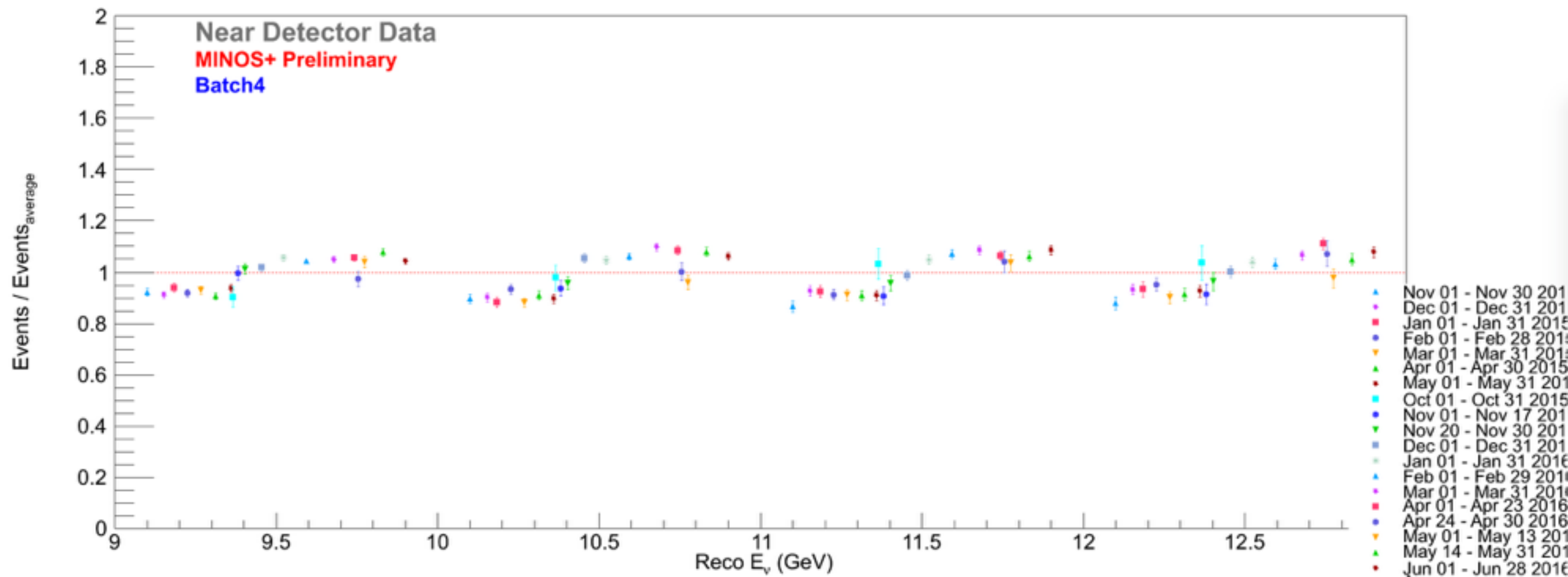
Batch4 7-13 GeV

Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)

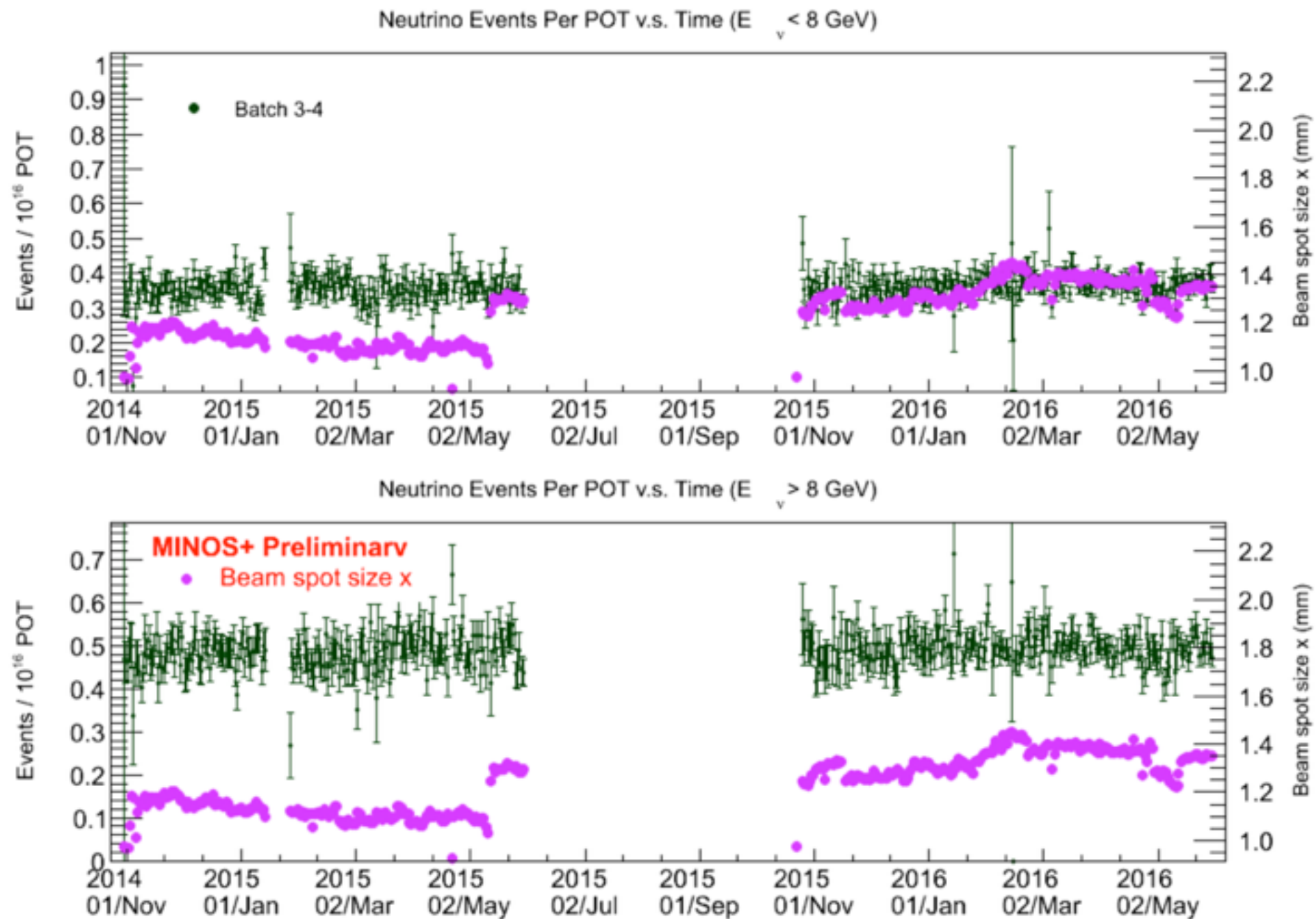


Batch4 9-13 GeV

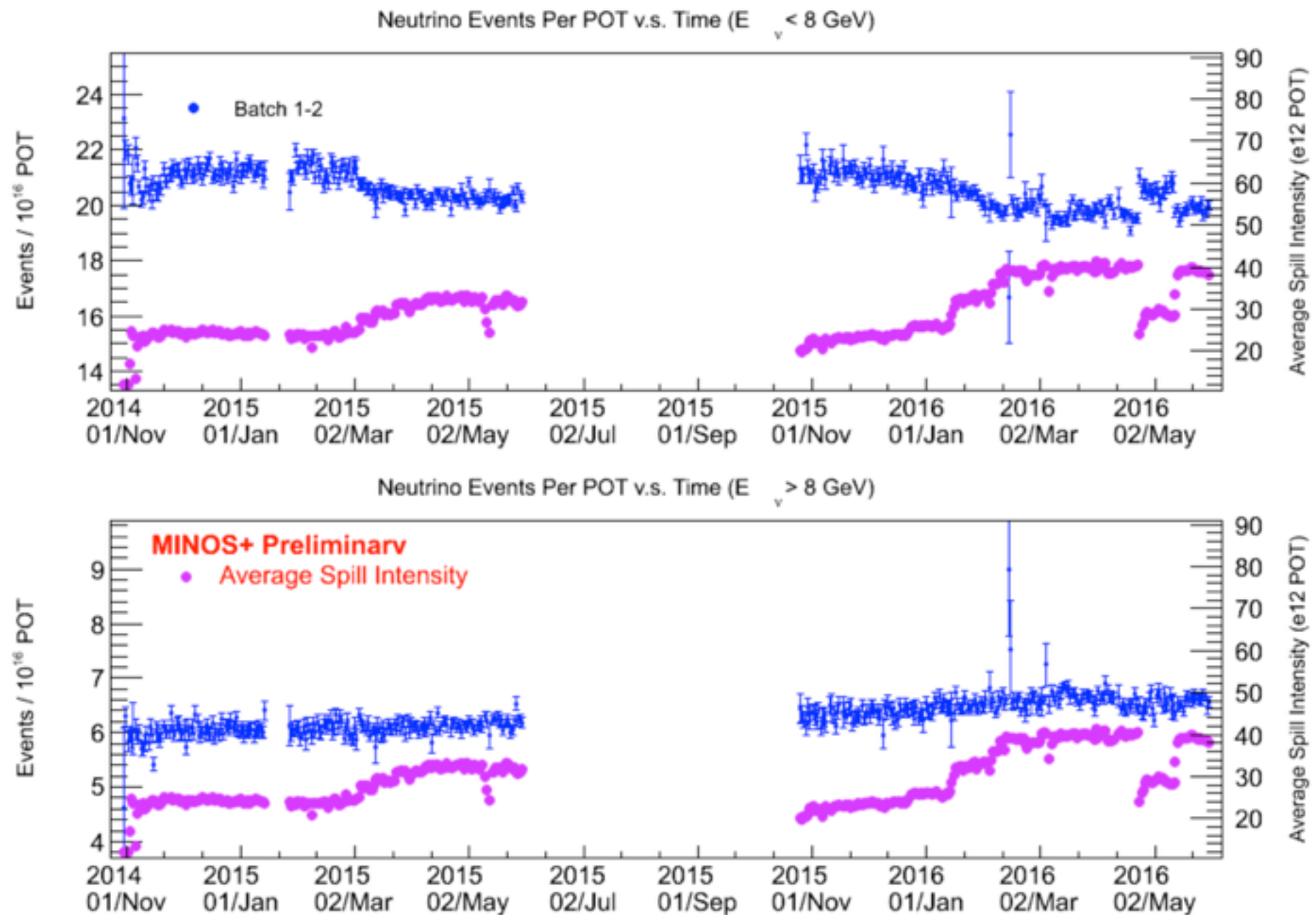
Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)



Spotsize



Intensity



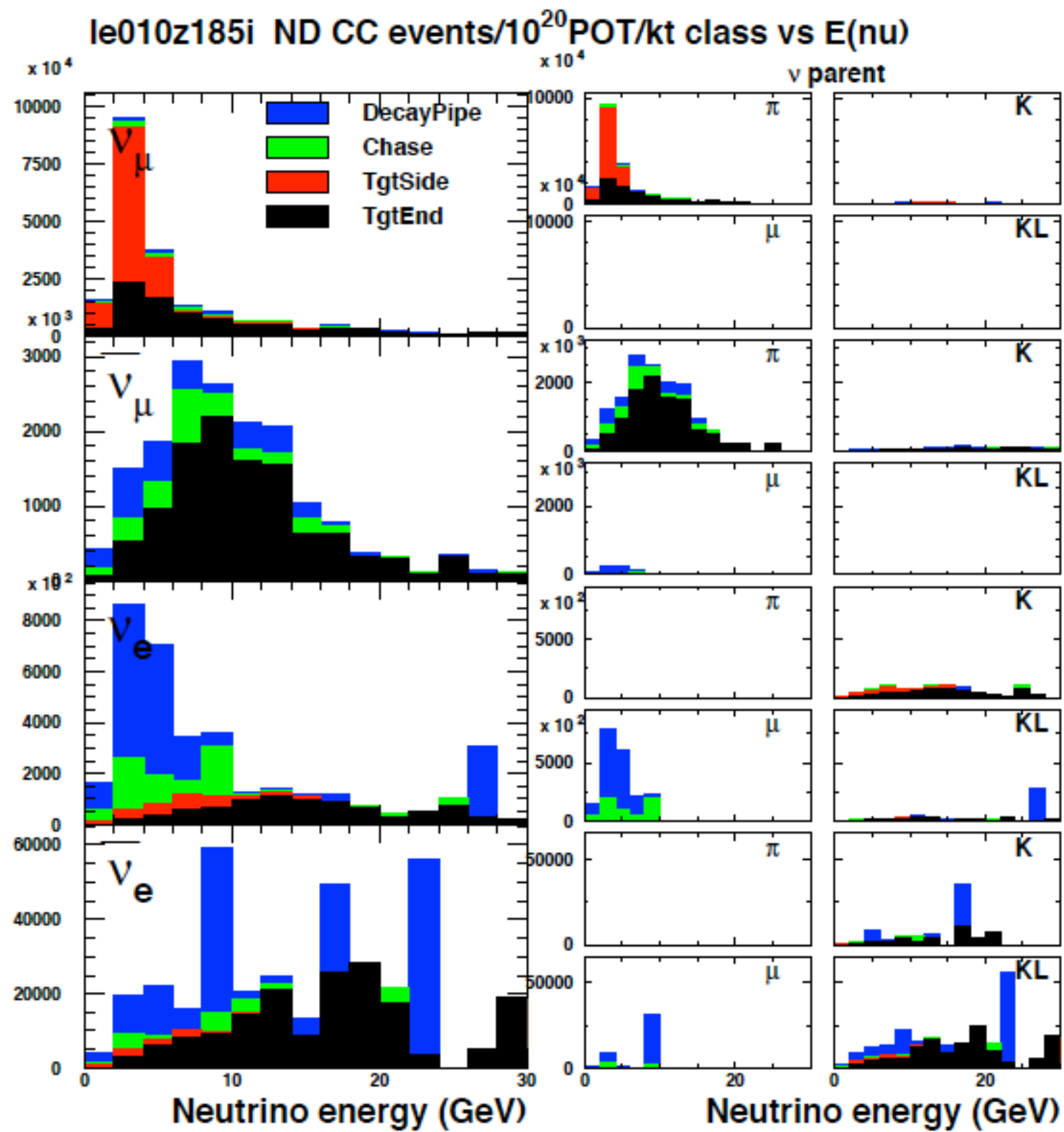
Did we see a step function?

- Yes, the beam spot size has changed during this period. But the Nov-Jan 2016 is similar with last month of RunXII.
- There is also an intensity effects. But the effects of RXIII should be similar with RXII last few month which is inconsistent.



Back up





le010z185i FD CC events/ 10^{20} POT/kt class vs E(nu)

